

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

841 Chestnut Building
Philadelphia, Pennsylvania 19107

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(Red)

SUBJECT: Pigeon Point Landfill, Delaware

DATE: AUG 12 1987

FROM: Kathryn ¹⁰⁷Davies, Hydrologist
Site Support Section (3HW26)

TO: Joel Karmazyn, SIO
Site Investigation Section (3HW23)



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Pursuant to your request, I have completed a review of the available HRS documents and associated comments submitted by the Delaware Solid Waste Authority (DSWA) and New Castle County in reply to the proposal of Pigeon Point Landfill to the NPL. My responses to these documents are as follows:

DSWA Comments

Page 10. The comment is made that the HRS misinterprets the hydrology and incorrectly identifies the gradients of the following wells: 31 as upgradient, 26R and 29 as side-gradient and 28 as downgradient. According to the April 17, 1985 submittal by Duffield Associates to the DSWA (HRS reference), well 31 was listed as a representative well screened in the Potomac sands and no qualifier was provided as to its location in an isolated lens. Therefore, according to the water elevations indicated in the report, well 31 seems to be an appropriate upgradient well. Furthermore, according to this same 1984-1985 data base, wells 26R and 29 appear to be side-gradient wells and well 28 appears to be downgradient of the landfill, as indicated in the HRS package.

Page 10. The comment that the distance to the nearest well, as described in the HRS, is inconsistent with the supporting documentation is correct.

Page 11. When the questionable arsenic analyses are disregarded, the recalculated HRS score of 25.95 is correct.

Page 12. The comment that the mid-site wells (46-49) should not be used to document a release to groundwater is correct. The purpose of these wells was to monitor leachate within the confines of the landfill. Use of these wells to indicate degradation of groundwater quality should be eliminated from the HRS document.

Page 19-23. The comments and associated supporting documentation regarding the March 1985 laboratory analyses for arsenic seem reasonable and valid. The observed release of arsenic should not be included in the HRS scoring.

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New Castle County Comments

Page 1. The noted inaccuracy in the HRS Documentation Record that the site covers 120 and not 187 acres is incorrect. According to Attachment 1 of the DSWA Comments, the total area of the landfill is approximately 185 acres.

Page 5. As noted in these comments, wells which are screened in the dredge spoils or marsh deposits are all downgradient of the landfill due to radial flow from mounding under the landfill. Therefore, the HRS is incorrect in identifying well 1(R) and 31A as upgradient.

Page 7. The discussion presented here regarding flow direction in the Potomac formation with respect to the ICI, New Castle and Artesian wells is moot. The HRS does not distinguish among groundwater flow directions in evaluating potential receptors within a three mile radius of the site.

Appendix. Map 2 - Potentiometric surface for the Potomac Formation, March 1985. The contours on this map are misrepresentative because water elevations for wells 31A and 45 were disregarded and the water elevation for well 41A is incorrect (see HRS documentation - Duffield Associates transmittal of 1984-1985 water elevations to DSWA).

As a final note, separate from the abovementioned comments to EPA, the HRS is incorrect in identifying well 23R as an upgradient well. According to the available information no such well exists.